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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,697	06/18/2001	Hiroshi Iizuka	P100158-00034	8595

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 09/09/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,697

Applicant(s)

IIZUKA ET AL.

Examiner

Steven D. Maki

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1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8-11-03 has been entered.

2) The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: incorporation of the description of the groove portions and the shape of the thin rib into the specification. In the specification on page 2 line 20 after "provided.", it is suggested to insert --The groove includes a generally U-shaped portion and a narrow groove portion. The thin rib has a generally trapezoidal shape.--. The subject matter in the above insertion is reasonably conveyed by the original disclosure when considered as a whole especially in view of original figure 3. In other words, the subject matter in the above insertion is not new matter.

3) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4) Claims 1 and 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the claimed shape of the main groove portion is unclear. In claim 1 line 4, it is suggested to insert --generally-- before "U-shaped" to clarify the claimed

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shape of the main groove portion and provide proper antecedent basis for "the generally U-shaped main groove portion" at line 14 of claim 1.

In claim 4, the description of "the narrow groove portion ... is set to" is ambiguous. In claim 4 line 3, it is suggested to change "is set to" to --has a width of--.

Claim 5 is indefinite because (1) it describes "any one of claims 1 to 4" and (2) claim 2 has been canceled.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan '212

6) **Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 9 lines 2-6) in view Japan '212 (JP 8-2212).**

The admitted prior art teaches the feature of the main groove widening during inflation. The claimed feature of the main groove having a generally U-shaped main groove portion and a generally trapezoidally shaped thin rib is suggested by Japan '212. The motivation to use such a main groove is to suppress occurrence of river wear (Japan '212). The combination of the applied prior art is described in more detail below:

The admitted prior art discloses a pneumatic tire having a ribbed tire having grooves whose width is widened during inflation wherein both groove walls are inclined at 80 degrees with respect to the tread surface. The admitted prior art appears to teach

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that uneven wear occurs with this tire. A thin rib is not provided in the main groove.

However, it would have been obvious to one of ordinary skill in the art to provide the main groove of the admitted prior art with the main groove configuration shown in figure 3 of Japan '212 since Japan '212 suggests using such a configuration to reduce occurrence of river wear. As can be seen in figure 3, Japan '212's thin rib has a generally trapezoidal shape. Claim 1 fails to exclude the claimed main groove having two generally trapezoidal shaped thin ribs. Claim 1 fails to require the groove wall near the center to extend to the tread surface.

As to claim 4, the claimed width of 4 mm or smaller for the narrow groove portion would have been obvious in view of Japan '212's teaching that groove 4 is a slender groove.

7) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page 9 lines 2-6) in view Japan '212 (JP 8-2212) as applied above and further in view of Kukimoto et al (US 5445201).

As to claim 5, it would have been an obvious alternative to use a straight circumferential groove instead of a zig-zag circumferential groove since Kukimoto et al, also directed to preventing wear, suggests using either a straight configuration or a zig-zag configuration for a circumferential groove.

Kukimoto et al

8) Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (specification page 1 lines 9-25, page 2 lines 1-4, page

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9 lines 2-6) in view of Kukimoto et al (US 5445201) and further in view of Kabe et al (US 5345988) and/or Montagne (US 3763911).

The admitted prior art discloses a pneumatic tire having a ribbed tire having grooves whose width is widened during inflation wherein both groove walls are inclined at 80 degrees with respect to the tread surface. The admitted prior art appears to teach that uneven wear occurs with this tire. A thin rib is not provided in the main groove. However, it would have been obvious to one of ordinary skill in the art to provide the grooves of the admitted prior art with a generally U-shaped main groove portion, a thin rib and a narrow groove portion since Kukimoto et al suggests using such a main groove configuration (see figures 19a, 19b) so that the tire has excellent uneven wear resistance. Furthermore, it would have been obvious to outwardly incline the narrow groove 4' so that the thin rib 3 has a generally trapezoidal shape as claimed in view of Kabe et al's teaching to incline a narrow groove adjacent a thin rib for preventing wear so that the thin rib is provided with a trapezoidal shape to prevent the thin rib from being chipped off and/or Montagne's teaching to outwardly incline a narrow groove adjacent to a thin rib to prevent wear. No unexpected results of uneven wear resistance over Kukimoto et al have been shown.

As to claim 3, the limitation of the height difference being 0-4 mm would have been obvious and could have been determined without undue experimentation in view of Kukimoto et al's teaching to locate the top of the protrusion (stepped zone) slightly below the tread surface so that the protrusion (which may define a height difference of 2 mm) contacts the road so as to serve as an uneven wear sacrificed portion.

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As to claim 4, the claimed width of 4 mm or smaller for the thin groove portion would have been obvious in view of Kukimoto et al's teaching that groove 4' is a narrow cut.

As to claim 5, the limitation of the main groove being straight would have been obvious in view of Kukimoto et al's teaching that the circumferential groove for the figure 19a, 19b embodiment is straight.

Remarks

9) Applicant's arguments with respect to claims 1 and 3-5 have been considered but are moot in view of the new ground(s) of rejection.

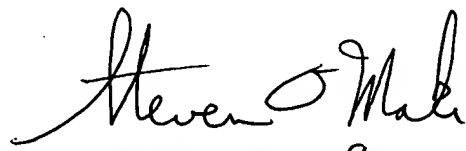
10) No claim allowed.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
September 5, 2003


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
Av 1733
9-5-03